

REMARKS

Claims 1-10 remain in this application. Claims 2, 9 and 10 have been amended.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Versions with Markings to Show Changes Made.**"

A new title and an abstract have been provided as required in the Office Action.

Claim 2 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 2 has been amended to delete the term "may," which the Office Action states renders the claim indefinite. Withdrawal of the rejection is respectfully requested.

Claims 1-7, 9 and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Rowe et al. Applicants respectfully traverse this rejection because the cited reference does not disclose or suggest features of the second display control means for changing the array hierarchical structure displayed on the screen, as in the present invention.

More specifically, the second display control means changes the array hierarchical structure displayed on the screen so as to display third icons to replace second icons in the array hierarchical structure on the screen, and display the second icons to replace first icons, when icon-specifying means specifies one of the second icons in the array hierarchical structure. Further, the second display control means also displays fourth icons to replace the first icons in the array hierarchical structure on the screen, and displays the first icons to replace the second icons, when the icon-specifying means specifies one of the first icons in the array hierarchical structure.

The Rowe et al. reference discloses a schedule display 50 including a category display 52, a subcategory display 54 and a program display 56 (see Figs. 2-4). Each of these three display elements are made up of a number of tiles representing categories, subcategories and programs. The schedule display also includes a program summary panel 90 for communicating detailed information about a selected tile from the program display. A focus frame 60 is provided for selecting the tiles in the display elements.

The Rowe et al. reference teaches that although the tiles within each display element may change, the three display elements themselves do not change. For example, when a tile is chosen in the category display 52, the tiles in displays 54 and 56 change correspondingly, and when a tile, for example "basketball", in the subcategory display 54 is selected, the tiles in the program

display 56 change, while the tiles in the category display 52 remain the same. Moreover, when a tile is selected in the program display 56, the category and the subcategory displays 52, 54 remain the same.

Thus, when one of the tiles in the subcategory display 54 is specified in Rowe et al. (i.e., the second icons), the tiles in the program display 56 (i.e., the third icons) change correspondingly. The program display (the third icons), however, does not replace the subcategory display (the second icons). Also, the subcategory display 54 (second icons) does not replace the category display 52 (i.e., the first icons). The Rowe et al. reference teaches that once a tile is selected in the category display 52, the display itself does not change regardless of the subcategory (second icons) or the program (third icons) selected, and that while the tiles within each display may change, the displays themselves are not replaced, but is shown at all times on the screen 50. In the present invention, when one of the second icons in the array hierarchical structure is specified, the third icons are displayed to replace the second icons in the array hierarchical structure on the screen, and the second icons are displayed to replace the first icons. For these reasons alone, the present invention as recited in claims 1, 9 and 10 are allowable over the cited reference.

Moreover, in the present invention, when the icon-specifying means specifies one of the first icons in the array hierarchical structure, the fourth icons are displayed to replace the first icons on the screen, and the first icons are displayed to replace the second icons on the screen. As discussed above, the Rowe et al. reference discloses four displays 52, 54, 56 and 90 which are constantly displayed on the screen 50. The reference does not teach or suggest that these displays are replaceable in any way. In other words, the reference does not teach that the fourth icons (i.e., the program summary panel 90) is displayed to replace the first icons (i.e., the category display 52). The reference also does not teach or suggest that the first icons is displayed to replace the second icons (i.e., the subcategory display 54). The Rowe et al. reference merely teaches changing the tiles within each display, but does not disclose or suggest replacing any of the displays with another display. For these reasons also, the present invention as described in independent claims 1, 9 and 10 are allowable over Rowe et al.

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Rowe et al. in view of Schneiderman (Designing the User Interface). Applicants respectfully traverse this

rejection for the reasons given with respect to claim 1, from which claim 8 depends, and because of the additional features described in claim 8.

In light of the above, Applicants respectfully submit that independent claims 1, 9 and 10, as well as claims 2-8 which depend from claim 1, are both not anticipated and non-obvious over the art of record. Accordingly, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY 

B. Joe Kim

Reg. No. 41,895

P.O. Box 1135

Chicago, Illinois 60690-1135

Phone: (312) 807-4354

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Title:

A new title has been provided.

In the Specification:

The paragraph beginning on page 21, line 3 has been amended as follows:

A desired program or desired movie and music distribution service information may also be received from the server 4 instead of a broadcasting station. Assume that the internal control unit 25 receives a command making a request for reception of a content corresponding to a desired music program from the server 4 from the operation control unit 24. In this case, the internal control unit 25 executes a selected routine to supply a command to the communication control unit 22 in order to make a request for reception of the content from the server 4 by way of the network 3. In response to this request, the communication control unit 22 issues a request for the desired music content to the server 4 by way of the network 3. The communication control unit 22 then receives the requested content transmitted by the server 4 by way of the network 3. Then, the content is transferred from the ~~tuner 21~~ communication control unit 22 to the internal control unit 25. Typically, the internal control unit 25 outputs the content to the monitor apparatus 8 to be displayed thereby by way of the video-signal-processing unit 26 and the video mix unit 28. The internal control unit 25 also outputs the content to the speaker 9 by way of the audio-signal-processing unit 27.

The paragraph beginning on page 22, line 2 has been amended as follows:

By the same token, the internal control unit 25 may receive a command making a request for reception of desired movie and music distribution service information from the server 4 from the operation control unit 24. In this case, the internal control unit 25 executes a selected routine to supply a command to the communication control unit 22 in order to make a request for reception of the movie and music distribution service information from the server 4 by way of the network 3. In response to this request, the communication control unit 22 issues a request for the desired movie and music distribution service information to the server 4 by way of the

network 3. The communication control unit 22 then receives the requested movie and music distribution service information transmitted by the server 4 by way of the network 3. The movie and music distribution service information is then transferred from the ~~tuner 21~~ communication control unit 22 to the internal control unit 25.

In the Claims:

Claims 2, 9 and 10 have been amended as follows:

2. (Amended) An information-processing apparatus according to claim 1 wherein said first to fourth icons ~~may each represent~~ represents a content or a class of a content.

9. (Amended) An information-processing method comprises:

a first display step of controlling a display of an icon hierarchy including a plurality of first icons on a first hierarchical layer, a plurality of second icons on a second hierarchical layer at a level lower than said first hierarchical layer, a plurality of third icons on a third hierarchical layer at a level lower than said second hierarchical layer and a plurality of fourth icons on a fourth hierarchical layer at a level higher than said first hierarchical layer so as to exhibit an array of said first icons as a column or a row on a screen and an array of said second icons as another column or another row on said screen wherein:

the number of said first icons displayed on said screen and the number of said second icons displayed on said screen are determined by the size of a display area on said screen; and

said array of said first icons and said array of said second icons are displayed on said screen to form an array hierarchical structure;

an icon-specifying step of specifying a desired icon from said first or second icons displayed in said array hierarchical structure; and

a second display control step of changing said array hierarchical structure displayed on said screen so as to:

display said third icons to replace said second icons in said array hierarchical structure on said screen and display said second icons to replace said first icons in said array hierarchical

structure on said screen when said icon-specifying ~~means~~ step specifies one of said second icons in said array hierarchical structure; and

display said fourth icons to replace said first icons in said array hierarchical structure on said screen and display said first icons to replace said second icons in said array hierarchical structure on said screen when said icon-specifying ~~means~~ step specifies one of said first icons in said array hierarchical structure.

10. (Amended) A recording medium for storing a program to be executed by a computer to implement an information-processing method, which comprises:

a first display control step of controlling a display of an icon hierarchy including a plurality of first icons on a first hierarchical layer, a plurality of second icons on a second hierarchical layer at a level lower than said first hierarchical layer, a plurality of third icons on a third hierarchical layer at a level lower than said second hierarchical layer and a plurality of fourth icons on a fourth hierarchical layer at a level higher than said first hierarchical layer so as to exhibit an array of said first icons as a column or a row on a screen and an array of said second icons as another column or another row on said screen wherein:

the number of said first icons displayed on said screen and the number of said second icons displayed on said screen are determined by the size of a display area on said screen; and

said array of said first icons and said array of said second icons are displayed on said screen to form an array hierarchical structure;

an icon-specifying step of specifying a desired icon from said first or second icons displayed in said array hierarchical structure; and

a second display control step of changing said array hierarchical structure displayed on said screen so as to:

display said third icons to replace said second icons in said array hierarchical structure on said screen and display said second icons to replace said first icons in said array hierarchical structure on said screen when said icon-specifying ~~means~~ step specifies one of said second icons in said array hierarchical structure; and

display said fourth icons to replace said first icons in said array hierarchical structure on said screen and display said first icons to replace said second icons in said array hierarchical

structure on said screen when said icon-specifying ~~means~~ step specifies one of said first icons in said array hierarchical structure.

In the Abstract:

The originally filed abstract has been replaced in its entirety with a new abstract.